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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,860	12/03/2004	Bernd Gombert		7334

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CINCINNATI, OH 45202

EXAMINER

DAVIS, OCTAVIA L

ART UNIT	PAPER NUMBER
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2855

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/516,860

Applicant(s)

GOMBERT, BERND

Examiner

Octavia Davis

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/3/04</u> .   | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

Acknowledgment is made of applicant's preliminary amendment filed 12/3/04.

### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because of the legal phraseology term "means" on lines 2 and 4.

### *Claim Objections*

2. Claim 2 is objected to because of the following informality: On line 7, replace "measuring" with "measuring". Appropriate correction is required.

Claim 16 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should depend on a previous claim in the alternative only. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 – 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Klinger (5,181,079).

Regarding claim 1, Klinger discloses an optoelectronic measurement arrangement comprising a spring 61 which spans an air gap defined by a certain distance between a first assembly 11, a second assembly 12 and a third assembly 6 (See Col 2, lines 1 – 9), the sensor being elastically connected with an object by the spring (See Col. 2, lines 2 – 5 and 48 – 51).

Regarding claim 2, an optoelectronic measuring instrument 3 (See Col. 2, lines 1 – 5) measures the position or movement of the first assembly to the second assembly, the third assembly 6 is connected to one of the objects with the position of the first assembly 11 relative to the third assembly 6 being changeable from the outside and the second assembly 12 assuming a position relative to the first assembly (See Col. 2, lines 26 – 34, 67 and 68 and Col. 3, lines 1 – 5).

Regarding claim 3, the third assembly 6 defines an interior space in which the first and second assemblies 11, 12 are arranged (See Fig. 1).

Regarding claims 4 – 7, the spring 61 includes helical springs arranged in a rotational manner (See Col. 2, lines 59 – 64).

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 17 is rejected under 35 U.S.C. 102(e) as being anticipated by Meusel et al (6,928,886).

Regarding claim 17, Meusel et al disclose an arrangement for the detection of relative movements of two objects comprising a force and/or moment sensor 50 including a first sensor subunit 60 connected with a first one of a plurality of objects, a second sensor subunit 62 coupled to the first sensor subunit by a spring 72, the two sensor subunits carrying part of measuring components 40, 42, 44, 46 and a second spring 72 is coupled to the objects (See Col. 7, lines 62 – 67, Col. 8, lines 1 – 46).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 8 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klinger (5,181,079) in view of Meusel et al (6,928,886).

Regarding claims 8 and 9, Meusel et al disclose an arrangement for the detection of relative movements of two objects comprising a first assembly 60 and as second assembly 62 that include a

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printed circuit board (See Col. 8, lines 12 – 29) and helical springs 72 soldered to the boards (See Col. 8, lines 30 – 34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Klinger according to the teachings of Meusel et al for the purpose of, providing boards to carry multiple electronic components that are arranged on the one board to significantly reduce assembly (See Meusel et al, Col. 5, lines 21 – 32).

Regarding claim 10, in Meusel et al, stop means 80 provided which limits the movement of the assemblies 60, 62 (See Col. 8, lines 52 - 57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Klinger according to the teachings of Meusel et al for the purpose of, providing stop bolts in order to limit the relative movements of the boards so that any overload cannot result in damage occurring to the force and/or moment sensor (See Meusel et al, Col. 8, lines 52 – 55).

Regarding claims 11 - 15, in Meusel et al, a plurality of optoelectronic measuring cells 20, 22, 42 are located on the circumference of a circle lying one above the other (See Col. 7, lines 31 – 40 and Col. 8, lines 3 – 17, See Figs. 1 and 2), the cells including a position sensitive detector 42 arranged in a beam path of a light emitting means 40 and a slit diaphragm 44, 46 in the beam path of the light emitting means between the light emitting means 40 and the position sensitive detector 42 with the detector axis of the detector being oriented perpendicularly to the slit direction of the slit diaphragm (See Col. 7, lines 62 – 67 and Col. 8, lines 1 – 3), one element 20, 122 of a system consisting of the light emitting means 40, the slit diaphragm 44, 46 and the detector 42 (See Col. 7, lines 62 – 66), the slit diaphragm 44, 46 being arranged on the board member 62 and the sensor 42 and ILED 40 arranged on the board member 60 (See Col. 8, lines 18 – 29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Klinger according to the teachings of Meusel et al for the purpose of, creating an arrangement for the detection of relative movements of two objects which complies with the increased measurements with respect to precision and speed at material and construction expenditures as low as possible (See Meusel et al, Col. 2, lines 17 – 23).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 18 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meusel et al in view of Klinger.

Regarding claim 18, Meusel et al disclose all of the limitations of these claims except for a teaching that the second object forms an annular body in whose annular interior the force and/or moment sensor is arranged at a distance from the annular body. However, in Klinger, the control handle 4 of the multi-dimensional joystick consists of the base body 5 and the assembly 6, the assembly 6 forms an enclosure in which the measuring arrangement 11 is located (See Col. 1, lines 67 – 68 and Col. 2, lines 1 – 11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Meusel et al according to the teachings of Klinger for the purpose of,

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utilizing an optoelectronic measuring means to determine the position of two bodies relative to each other (See Klinger, Col. 1, lines 6 – 8).

Regarding claims 19 – 23, in Meusel et al, several springs 72 are provided (See Fig. 3) and are each arranged in a matrix circuit 74 (See Col. 8, lines 30 – 46).

Regarding claim 24, in Meusel et al, the subunits 60, 62 act as carrying members and are coupled to each other using the springs 72 (See Col. 5, lines 21 – 32 and Col. 8, lines 23 – 29).

Regarding claims 25 and 26, in Meusel et al, a plurality of optoelectronic measuring cells 20, 22, 42 are located on the circumference of a circle lying one above the other (See Col. 7, lines 31 – 40 and Col. 8, lines 3 – 17, See Figs. 1 and 2), the cells including a position sensitive detector 42 arranged in a beam path of a light emitting means 40 and a slit diaphragm 44, 46 in the beam path of the light emitting means between the light emitting means 40 and the position sensitive detector 42 with the detector axis of the detector being oriented perpendicularly to the slit direction of the slit diaphragm (See Col. 7, lines 62 – 67 and Col. 8, lines 1 – 3), one element 20, 122 of a system consisting of the light emitting means 40, the slit diaphragm 44, 46 and the detector 42 (See Col. 7, lines 62 – 66), the slit diaphragm 44, 46 being arranged on the board member 62 and the sensor 42 and ILED 40 arranged on the board member 60 (See Col. 8, lines 18 – 29).

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gombert (7,026,599) disclose a position and/or movement sensor with overload protection.

Gombert (6,753,519) discloses an arrangement for the detection of relative movements or relative positions of two objects.



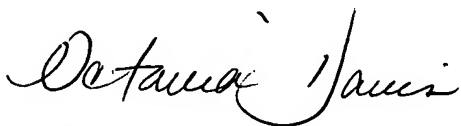
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Gombert (6,804,012) discloses an arrangement for the detection for relative movements or relative position of two objects.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Octavia Davis whose telephone number is 571-272-2176. The examiner can normally be reached on Mon through Thurs from 9 to 6. The examiner can also be reached on alternate Fridays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



OD/2855

5/25/06



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